What is claimed is:

1. A simultaneous bidirectional port circuit comprising:

a sampling circuit configured to sample an incoming waveform;

a receiver coupled to the sampling circuit configured to measure an amplitude of the incoming waveform;

a storage mechanism to store information from the receiver; and

a control mechanism configured to control the receiver and the sampling circuit to measure the amplitude of a repetitive incoming waveform at a plurality of time points.

2. The simultaneous bidirectional port circuit of claim 1 wherein the receiver comprises a variable offset comparator.

3. The simultaneous bidirectional port circuit of claim 1 wherein the storage mechanism comprises a counter.

4. The simultaneous bidirectional port circuit of claim 1 wherein the storage mechanism comprises a shift register.

5. The simultaneous bidirectional port circuit of claim 1 further comprising an output driver having an output node coupled to an input node of the sampling circuit.

6. The simultaneous bidirectional port circuit of claim 1 wherein:

the receiver comprises a comparator; and

the simultaneous bidirectional port circuit further comprises a variable reference coupled to the comparator.

7. The simultaneous bidirectional port circuit of claim 1 wherein the control mechanism is configured to calculate a distribution for each of the plurality of time points.

8. An integrated circuit comprising:

a signal node to receive a data signal; and

a port circuit coupled to the signal node, the port circuit configured to receive digital data from the signal node during a first mode of operation, and configured to capture a waveform of a signal on the signal node during a second mode of operation.

9. The integrated circuit of claim 8 wherein the port circuit comprises a variable offset comparator having an input node coupled to the signal node.

10. The integrated circuit of claim 8 wherein the port circuit comprises an output driver having an output coupled to the signal node.

11. The integrated circuit of claim 10 wherein the port circuit is configured as a simultaneous bidirectional port circuit.

12. The integrated circuit of claim 8 further comprising a clock input node to receive a clock signal.

13. The integrated circuit of claim 12 wherein the port circuit further comprises a sampling circuit coupled to the clock input node to sample the signal on the signal node at various time points.

14. The integrated circuit of claim 13 further comprising a storage mechanism to store information describing the waveform of the signal.

15. The integrated circuit of claim 14 wherein the storage mechanism comprises a counter.

16. The integrated circuit of claim 14 wherein the storage mechanism comprises a shift register.

17. An electronic system comprising:

an integrated circuit including a signal node to receive a signal, and a port circuit coupled to the signal node, the port circuit configured to receive digital data from the signal node during a first mode of operation, and configured to capture a waveform of the signal on the signal node during a second mode of operation; and

a network interface capable of coupling the integrated circuit to a network.

18. The electronic system of claim 17 wherein the port circuit comprises a variable offset comparator having an input node coupled to the signal node.

19. The electronic system of claim 17 wherein the port circuit comprises an output driver having an output coupled to the signal node.

20. The electronic system of claim 17 wherein the port circuit comprises a sampling circuit to sample the signal on the signal node at various time points.

21. A method of capturing a waveform on an integrated circuit die comprising:

sampling a simultaneous bidirectional data signal at a first time point;

receiving the simultaneous bidirectional data signal at a receiver; and

varying a threshold of the receiver.

22. The method of claim 21 wherein sampling comprises subtracting an outgoing signal from an incoming signal.

23. The method of claim 21 wherein receiving comprises receiving the simultaneous bidirectional data signal at a variable offset comparator.

24. The method of claim 23 wherein varying a threshold comprises varying an offset of the variable offset comparator.

25. The method of claim 24 further comprising:

sampling the simultaneous bidirectional data signal at a plurality of time points; and

varying the offset of the variable offset comparator at each of the plurality of time points.

26. The method of claim 21 wherein the simultaneous bidirectional data signal is repetitive, and sampling at a first time point comprises taking a plurality of samples at substantially the same time with respect to the repetitive signal.

27. The method of claim 26 further comprising varying the threshold during the plurality of samples.

28. A method comprising:

receiving a signal at a receiver configured to receive digital data and configured to capture a waveform of the signal;

sampling the signal at a plurality of time points; and

varying a threshold of the receiver at each of the plurality of time points.

29. The method of claim 28 wherein the signal is repetitive, and wherein sampling comprises sampling the repetitive signal more than once at each of the plurality of time points.

30. The method of claim 29 wherein:

receiving comprises receiving the signal at a variable offset comparator; and

varying a threshold of the receiver comprises varying an offset of the variable offset comparator.